

Mediterranean diet may reduce chance of frailty, according to new study

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A new study published in *The American Journal of Clinical Nutrition* has found that consuming a Mediterranean-style diet may prevent frailty. Defined as a recognizable state of increased vulnerability resulting from a decline in function across multiple physiological systems, frailty

affects 10–15% older adults, and leads to other health issues. Although the general benefits of a Mediterranean-style diet are well known, its role in the reduction of frailty in older Americans who do not normally consume such a diet was unclear.

The study titled "Adherence to the Mediterranean-style diet and high intake of total [carotenoids](#) reduces the odds of frailty over 11 years in older adults: Results from the Framingham Offspring Study," showed that consuming a Mediterranean-style diet may prevent the development of frailty with aging. The study included 2,384 non-frail adults from the Framingham Offspring Study with Mediterranean-style dietary pattern score and antioxidant intakes [vitamin C, E, and total carotenoids] estimated from a food frequency questionnaire combined with frailty assessments that were conducted over ~11 years. Each unit higher score on the Mediterranean Style Dietary Pattern Score (i.e., higher adherence to a Mediterranean-style diet) reduced the odds of frailty by 3%.

The study also determined whether specific antioxidants (carotenoids, vitamins E, and C) found in a Mediterranean-style diet are related with frailty. Higher intake of carotenoids (an antioxidant commonly found in brightly colored fruits and vegetables) had the strongest association with reduced likelihood of frailty development in middle-aged and older men and women from the Framingham Heart Study, reporting that each 10-mg higher total carotenoid intake reduced the odds of frailty by 16%. Vitamin E and C were not meaningfully associated with frailty prevention.

Courtney L Millar, Ph.D., Post-Doctoral Fellow, Marcus Institute of Aging Research, Hebrew SeniorLife, and Harvard Medical School, is the lead author. "People may be able to prevent [frailty](#) by following the principles of the Mediterranean-style diet," Dr. Millar said.

The Mediterranean-style diet encourages consumptions of fruits and

vegetables.

"Increasing the intake of brightly colored fruits and vegetables that are rich in carotenoids as well as other bioactive compounds may ultimately affect the health of [older adults](#)," said Dr. Shivani Sahni, the senior author.

The Framingham Heart Study, Boston University, and Tufts University collaborated on this observational study.

More information: Courtney L Millar et al, Adherence to the Mediterranean-style diet and high intake of total carotenoids reduces the odds of frailty over 11 years in older adults: Results from the Framingham Offspring Study, *The American Journal of Clinical Nutrition* (2022). [DOI: 10.1093/ajcn/nqac130](https://doi.org/10.1093/ajcn/nqac130)

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